

Claims

1-42. (cancelled)

43. (previously presented) An enhanced-surface-area conductive structure in an integrated circuit, the structure comprising a conductive layer of ruthenium and ruthenium oxide, wherein at least one surface of the conductive layer has a plurality of pits situated at ruthenium phase zones in the conductive layer.

44. (previously presented) A capacitor structure in an integrated circuit, comprising:
a layer of conductive metallic oxide with a surface having a plurality of pits situated at metallic phase zones in the conductive layer; and
a layer of dielectric material disposed conformally on the pitted surface.

45. (previously presented) A capacitor structure in an integrated circuit, the structure comprising:

a supporting structure;
a layer of conductive metallic oxide having a surface that includes a plurality of pits situated at metallic phase zones in the conductive metallic oxide layer; and
a layer of dielectric material disposed conformally on the pitted surface.

46. (previously presented) The capacitor structure of claim 45, further comprising a continuous layer of conductive material disposed on the layer of dielectric material.

47. (previously presented) The capacitor structure of claim 45, wherein at least some of the pits in the surface of the conductive metallic oxide layer extend completely through the conductive metallic oxide layer.

48. (previously presented) The capacitor structure of claim 45, wherein the pits in the surface of the conductive metallic oxide layer have a mean diameter in the range of one to three times a thickness of the conductive metallic oxide layer.

49. (previously presented) The capacitor structure of claim 45, wherein the pits in the surface have a mean closest distance that is at least two times a thickness of the layer of dielectric material.

50. (previously presented) The capacitor structure of claim 45, wherein the conductive metallic oxide layer comprises ruthenium oxide.